

## **REMARKS**

This Response is submitted in response to the Non-final Office Action mailed February 20, 2008.

Claims 1, 10, 32, 34, 36, and 39 are amended. New claim 41 is presented. Claims 1-18, 28, 32, 34-36, and 39-40 are pending in the Application. Reconsideration of the pending claims is respectfully requested in view of the above amendments and the following remarks.

### **I. Summary of Office Action**

Claims 32 and 34 are objected to because of informalities.

Claims 1-18 and 39 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,922,708 issued to Sedlar ("Sedlar"), in view of U.S. Patent No. 6,356,902 issued to Tan et al. ("Tan"), and further in view of U.S. Patent No. 6,625,624 issued to Chen et al. ("Chen").

Claim 40 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Sedlar, in view of Tan, in view of Chen, and further in view of U.S. Patent No. 6,636,250 issued to Gasser et al. ("Gasser").

Claims 28 and 34-36 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Chen, and further in view of Tan.

Claim 32 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Chen, in view of Tan, and further in view of Sedlar.

### **II. Claim Objections**

With respect to the objections to claims 32 and 34, Applicants have amended these claims to address the Examiner's concerns. Accordingly, Applicants request that the claim objections be withdrawn.

### **III. Claims Rejected Under 35 U.S.C. § 103**

With respect to the § 103(a) rejections of independent Claims 1, 10, and 39 over Sedlar, Tan, and Chen, Applicants submit that Sedlar, Tan, and Chen do not teach or suggest, either individually or in combination, any of the following features: "using a first thread to assign a first unique identification (ID) number to a first determined directory and a second unique ID number to a second determined directory," "using a second thread to examine the determined files," and "wherein the directory numbers are assigned while the directory structure is being traversed in DFS order."

Tan discloses mapping a tree structure to a graph map composed of a single-link node. As part of this mapping process, tree nodes at a current level are stored in "Parent-stack memory" and nodes at the next level are stored in "Child-stack memory" (col. 5, lines 31-33).

However, Tan does not disclose using multiple threads to perform its mapping process. Tan's "Parent-stack memory" and "Child-stack memory" do not correspond to "a first thread" and "a second thread." A "stack" is a data structure that is used to store data. In contrast, a "thread" is used in the context of a process; i.e., a process contains one or more "threads" that execute the process. Storing nodes in different stacks in memory is not the same as or equivalent to using multiple threads to perform a process. Moreover, Tan does not disclose "assign[ing] a first unique identification (ID) number to a first determined directory and a second unique ID number to a second determined directory." At most, Tan assigns level numbers to nodes in the tree structure; several nodes may share the same level number (col. 5, lines 25-39; Fig. 7). Tan does not assign unique identification numbers to nodes in the tree structure. In addition, Tan's level numbers are not "assigned while the directory structure is being traversed in DFS order." Tan does not disclose that DFS order is used to map its tree structure to a graph map composed of a single-link node (col. 5, line 7 – col. 6, line 3). Only after the tree structure has been mapped to a graph map composed of a single-link node (using

an order other than DFS), does Tan perform depth-first or breadth-first searches on the tree structure (col. 7, lines 22-59).

Nor does Chen disclose any of the following features: "using a first thread to assign a first unique identification (ID) number to a first determined directory and a second unique ID number to a second determined directory," "using a second thread to examine the determined files," and "wherein the directory numbers are assigned while the directory structure is being traversed in DFS order." Chen discloses a system for archiving and retrieving web pages. While Chen discloses that different threads, including a user thread, an agent thread, and a walking thread, may be used within its system (Fig. 2), Chen does not disclose that these threads are used "to assign a first unique identification (ID) number to a first determined directory and a second unique ID number to a second determined directory" and "to examine the determined files." Nor does Chen disclose "directory numbers [that] are assigned while the directory structure is being traversed in DFS order." Indeed, the Examiner does not cite Chen as disclosing this feature.

Nor does Sedlar disclose any of the following features: "using a first thread to assign a first unique identification (ID) number to a first determined directory and a second unique ID number to a second determined directory," "using a second thread to examine the determined files," and "wherein the directory numbers are assigned while the directory structure is being traversed in DFS order." Sedlar discloses a file system interface for saving and retrieving files. However, Sedlar does not disclose that its file system uses multiple threads to save and/or retrieve files. Nor does Sedlar disclose "directory numbers [that] are assigned while the directory structure is being traversed in DFS order." Indeed, the Examiner does not cite Sedlar as disclosing these features.

Independent Claims 1, 10, and 39 are allowable for at least the foregoing reasons.

With respect to the § 103(a) rejections of independent Claim 28 over Chen and Tan, Applicants submit that Chen and Tan do not teach or suggest, either individually or in combination, either "assigning a depth first search (DFS) ID to the first directory, wherein the directory numbers are assigned while the directory structure is being traversed in the DFS order," or "placing the first subset of files in a file queue for examination by a file thread."

As described above, Chen discloses a system for archiving and retrieving web pages. While Chen describes that a walking thread may walk through a web site for a set of HTML pages (col. 7, lines 21-28), Chen does not describe "a file thread" that examines "the first subset of files in a file queue." Chen describes that its walking thread may be used to create a portable package for the browsing of document pages (col. 8, lines 3-23). The data in the package is compressed, and the package may be attached to an email or copied from one machine to another. Nowhere does Chen describe a thread that examines the data of the package. Nor does Chen disclose "assigning a depth first search (DFS) ID to the first directory, wherein the directory numbers are assigned while the directory structure is being traversed in the DFS order." Indeed, the Examiner does not cite Chen as disclosing this feature.

Nor does Tan disclose either "assigning a depth first search (DFS) ID to the first directory, wherein the directory numbers are assigned while the directory structure is being traversed in the DFS order," or "placing the first subset of files in a file queue for examination by a file thread." As described above, Tan does not disclose using multiple threads to perform its mapping process. Tan's "Parent-stack memory" and "Child-stack memory" are data structures, and do not correspond to multiple threads used to perform a process. Tan's "Parent-stack memory" and "Child-stack memory" do not correspond to the "directory walking thread" and "file thread" of Claim 28 any more than they correspond to the "first thread" and "second thread" of Claims 1, 10, and 39, as described above. Moreover, as described above, Tan does not disclose "assigning a depth first search (DFS) ID to the first directory, wherein the directory numbers are

assigned while the directory structure is being traversed in the DFS order." At most, Tan discloses assigning level numbers to nodes in a tree structure, and does not describe that these level numbers are assigned in a DFS order.

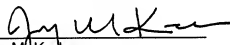
Independent Claim 28 is allowable for at least the foregoing reasons.

Thus, for at least the foregoing reasons, the independent claims and all claims that depend from them are believed to be patentable over the cited art.

Please charge any deficiencies or credit any overpayments to our Deposit Account No. 50-2207, under Order No. 672728062US1 from which the undersigned is authorized to draw.

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Respectfully submitted,

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